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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/782,850
Filing Date: February 14, 2001
Appellant(s): GEBERT ET AL.

Mark L. Watson
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 27, 2009 appealing from the Office action mailed January 21, 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Appeal – 2007-2804, Application 09/782,850: Prior Board decision mailed on January 23, 2009, regarding the present application.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

The amendment after final rejection filed on March 12, 2009 has been entered as indicated in the Advisory Action mailed on March 24, 2009.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

GROUNDS OF REJECTION NOT ON REVIEW

The following grounds of rejection have not been withdrawn by the examiner, but they are not under review on appeal because they have not been presented for review in the appellant's brief.

Claims 57, 59, 70, 72, 82, and 84 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Adler et al. (hereinafter Adler, Extensible Stylesheet Language (XSL) Version 1.0, published on October 18, 2000) in view of Saito et al. (hereinafter Saito, US Patent Number 5,323,312, issued on June 21, 1994) as applied to claims 55, 68, and 80 above, and further in view of Barry et al. (hereinafter Barry, US Patent Number 6,606,165, filed on January 8, 1999).

Claims 58, 71, and 83 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Adler et al. (hereinafter Adler, Extensible Stylesheet Language (XSL) Version 1.0, published on October 18, 2000) in view of Saito et al. (hereinafter Saito, US Patent Number 5,323,312, issued on June 21, 1994) further in view of Barry et al. (hereinafter Barry, US Patent Number 6,606,165, filed on January 8, 1999) as applied to claims 57, 70, and 82 above, and further in view of Sall (as found in the IDS - FOP: Formatting Object to PDF Translator (James Tauber, published in 1999).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Adler et al. "Extensible Stylesheet Language (XSL) Version 1.0" W3C, Working Draft (October 18, 2000), pp. 1-29

Sall, "FOP: Formatting Object to PDF Translator (James Tauber)" (May 24, 1999), pp. 1-3

5,323,312	Saito et al.	6-1994
6,606,165	Barry et al.	1-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 49-87 remain rejected on the grounds of *Res Judicata* based on a prior adjudication (see BPAI Decision mailed on January 23, 2008 affirming the examiner's rejection of claims 1, 2, 4, 8-11, 14-16, 18, 22-25, 28-30, 32, 36-39, and 42-48) against the inventor on patentably nondistinct claims involving the same issues. The limitations of claim 49 map to the patentably nondistinct limitations of previously rejected and adjudicated claim 1 as follows:

Previously rejected, appealed, and affirmed	Newly filed claim 49 under 37 CFR 1.114:	Reasons limitations are patentably nondistinct:

claim 1:		
A method for processing a source document in a structured document format including elements providing source content to render, wherein the source content comprises code that is rasterized into output, comprising:	A method for processing a source document in a structured document format including elements providing source content to render, wherein the source content comprises code that is rasterized into output, comprising:	Language repeated verbatim.
receiving the source document including the source content in a presentation language;	receiving the source document including the source content in a presentation language;	Language repeated verbatim.
receiving a layout data structure separate from the source document, providing formatting properties specifying a layout and format of the content output, wherein the layout data structure does not include source content;	receiving a layout data structure separate from the source document, providing formatting properties specifying a layout and format of the content output, wherein the layout data structure does not include source content;	Language repeated verbatim.
processing the source document and the layout data structure to determine formatting properties, including page divisions, for the content in the source document;	processing the source document and the layout data structure to determine formatting properties, including page divisions, for the content in the source document;	Language repeated verbatim.
generating ***multiple page objects*** wherein each page object includes the source content in the presentation language used in the source document and the determined formatting properties ***for one page,***	generating ***a first page object*** including the source content in the presentation language used in the source document and formatting properties ***for only one page;***	Claim 1 discusses generating "multiple page objects" that meet a certain criteria, while claim 49 discusses generating both "a first page object" and "a second page object" which meet the same criteria as the "multiple page objects" in claim 1. Clearly first and second objects (two existing objects of specific criteria) are nondistinct from multiple objects (two
	generating ***a second page object*** including the source content in the presentation language used in the source document and formatting	

	properties ***for a only second page,***	or more objects of the same specific criteria) each of which contain content and formatting for one page.
wherein ***at least one page object*** has multiple content elements, and wherein the content elements include content to place on the pages; and	wherein ***the first page object*** includes a first set of content elements to place on the first page and ***the second page object*** includes a second set of content elements to place on the second page; and	Claim 1 discusses that "at least one page object" (1 or more) has multiple content elements to place on the page. Claim 49 discusses "the first page object" has a first set of content elements (multiple content elements) to place on the first page and "the second page object" has a second set of content elements (multiple content elements) to place on the second page. The only difference in the claims is that claim 1 states that "at least one page object" meets specific criteria, while claim 49 states that a first and second object meet the same specific criteria. However, it is clear that two objects of a specific criteria are patentably nondistinct from one or more objects (which by definition would include two) of the same specific criteria.
transmitting ***the page objects*** to a rasterizer to transform into renderable information capable of being generated by an output device.	transmitting ***the first page object and the second page object*** to a rasterizer to transform into renderable information capable of being generated by an output device.	Claim 1 discusses transmitting "the page objects" to a rasterizer, claim 49 discusses transmitting "the first page object and the second page object" to a rasterizer. Again, clearly first and second objects

		(two existing objects of specific criteria) are nondistinct from the page objects (two or more objects of the same specific criteria).

Independent claims 62 and 75 are substantially similar to claim 49, and are considered to be patentably nondistinct of claims 15 and 29 of the previously appealed claims for the same reasons has claim 49 when compared to claim 1 of the previously appealed claims.

Dependent claims 50-61 are considered to be patentably nondistinct of claims 2, 4-11, 14, 43, and 44 of the previously appealed claims due to the fact that they recite the language of the previously appealed claims verbatim.

Dependent claims 62-74 are considered to be patentably nondistinct of claims 16, 18-25, 28, 45, and 46 of the previously appealed claims due to the fact that they recite the language of the previously appealed claims verbatim.

Dependent claims 76-87 are considered to be patentably nondistinct of claims 30, 32-39, 42, 47 and 48 of the previously appealed claims due to the fact that they recite the language of the previously appealed claims verbatim.

Thus, all of the currently pending claims as filed are rejected on the grounds of *Res Judicata* based on a prior adjudication against the inventor on patentably nondistinct claims involving the same issues, in effect barring the examiner from issuing these claims.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 49-56, 60-69, 73-81 and 85-87 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Adler et al. (hereinafter Adler, Extensible Stylesheet Language (XSL) Version 1.0, published on October 18, 2000) in view of Saito et al. (hereinafter Saito, US Patent Number 5,323,312, issued on June 21, 1994).

Regarding independent claim 49, Adler discloses a method in which a source document including source content is received in XML (pages 17-18, section 1.1 Processing a Stylesheet). Then, a layout data structure (XSL stylesheet) which provides formatting properties and is separate from the source document and does not contain source content is received (pages 17-18, section 1.1 Processing a Stylesheet). The two documents are processed together and to determine formatting, including page divisions, of the source content (pages 20-21, Section 1.1.2 Formatting and pages 25-27, Section 1.2.1 Paging and Scrolling and Section 1.2.3 An Extended Page Layout Model). Adler also discloses a method in which multiple page objects are generated by filling the XML content into “containers”, each of the objects containing the content and the information required to format the content for one page, at which point the “containers” are rasterized into page instances which are capable of being generated by an output device (pages 20-21, Section 1.1.2 Formatting and pages 25-27, Section 1.2.1 Paging and Scrolling and Section 1.2.3 An Extended Page Layout Model). Adler discloses that the page objects include the content that is to be placed on the pages,

Adler does not explicitly state that the content consists of multiple content elements. However, Saito discloses that it was well known in the art that a structured document could consist of two parts a layout structure and a logical structure (source content), and when filling the page objects defined by the layout structure more than one content object from the logical structure could be used, thus allowing more than one content object to exist within each page object (column 1, lines 31-57 of Saito). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the method of Adler with the well-known material disclosed by Saito because it would have allowed the space in visible pages to be used completely by filling page objects with more than content object where it was warranted.

Regarding dependent claims 50, Adler discloses a method in which page divisions may be presented in XSL-FO, which is a device independent language (pages 20-21, Section 1.1.2 Formatting and pages 25-27, Section 1.2.1 Paging and Scrolling and Section 1.2.3 An Extended Page Layout Model).

Regarding dependent claim 51, Adler discloses a method in which a page description language is used (pages 17-18, section 1.1 Processing a Stylesheet).

Regarding dependent claim 52, Adler discloses a method in which the source document does not indicate page divisions (pages 17-18, section 1.1 Processing a Stylesheet).

Regarding dependent claims 53 and 54, Adler does not explicitly disclose that a page object is filled with content objects until there is no more space, then the next page element is filled with the sequential content objects, or that page sequence

elements exist in which the content is accessed in sequence and added to the page objects accordingly. However, Saito discloses that it was well known in the art that a structured document could consist of two parts a layout structure and a logical structure (source content in the logical page viewing sequence), and when filling the page objects defined by the layout structure more than one content object from the logical structure could be used per page until a page is full at which point the next page object is filled with content and so forth (column 1, lines 31-57 of Saito). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the method of Adler with the well-known material disclosed by Saito because it would have allowed the space in visible pages to be used completely by filling page objects before moving on to filling the next sequential page object.

Regarding dependent claims 55 and 56, Adler also discloses a method in which the source document (XML) and the result document (XSL-FO) may be different formats, and the result document is formatted based on the layout data structure (XSL) (pages 17-18, section 1.1 Processing a Stylesheet and pages 20-21, Section 1.1.2 Formatting). Adler also discloses a method in which multiple page objects are generated by filling the XML content into “containers”, each of the objects containing the content and the information required to format the content, at which point the “containers” are rasterized into page instances which are capable of being generated by an output device (pages 20-21, Section 1.1.2 Formatting and pages 25-27, Section 1.2.1 Paging and Scrolling and Section 1.2.3 An Extended Page Layout Model).

Regarding dependent claims 60 and 61, Adler discloses a method in which page divisions may be presented in XSL-FO, which is a device independent language (pages 20-21, Section 1.1.2 Formatting and pages 25-27, Section 1.2.1 Paging and Scrolling and Section 1.2.3 An Extended Page Layout Model).

Regarding independent claim 62 and dependent claims 63-69, 73 and 74, the claims incorporate substantially similar subject matter as claims 49-56, 60, and 61. Thus, the claims are rejected along the same rationale as claims 49-56, 60, and 61.

Regarding independent claim 75 and dependent claims 76-81 and 85-87, the claims incorporate substantially similar subject matter as claims 49-56, 60, and 61. Thus, the claims are rejected along the same rationale as claims 49-56, 60, and 61.

Claims 57, 59, 70, 72, 82, and 84 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Adler et al. (hereinafter Adler, Extensible Stylesheet Language (XSL) Version 1.0, published on October 18, 2000) in view of Saito et al. (hereinafter Saito, US Patent Number 5,323,312, issued on June 21, 1994) as applied to claims 55, 68, and 80 above, and further in view of Barry et al. (hereinafter Barry, US Patent Number 6,606,165, filed on January 8, 1999).

Regarding dependent claim 57, 59, 70, 72, 82, and 84, Adler does not disclose page objects which are in a third presentation language which is a page description language. However, Barry discloses a method in which a document is split into multiple page objects that contain the source content and formatting for one page in a different page description language (image bit-map) (column 1, line 24- column 3, line 11 of

Barry). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the method of Adler with the method of Barry because it would have simplified the use of an output device to render a multi-paged document.

Claims 58, 71, and 83 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Adler et al. (hereinafter Adler, Extensible Stylesheet Language (XSL) Version 1.0, published on October 18, 2000) in view of Saito et al. (hereinafter Saito, US Patent Number 5,323,312, issued on June 21, 1994) further in view of Barry et al. (hereinafter Barry, US Patent Number 6,606,165, filed on January 8, 1999) as applied to claims 57, 70, and 82 above, and further in view of Sall (as found in the IDS - FOP: Formatting Object to PDF Translator (James Tauber), published in 1999).

Regarding dependent claims 58, 71, and 83, Adler also discloses a method in which the source document (XML) and the result document (XSL-FO) may be different formats, and the result document is formatted based on the layout data structure (XSL) (pages 17-18, section 1.1 Processing a Stylesheet and pages 20-21, Section 1.1.2 Formatting). Adler also discloses a method in which multiple page objects are generated by filling the XML content into “containers”, each of the objects containing the content and the information required to format the content, at which point the “containers” are rasterized into page instances which are capable of being generated by an output device (pages 20-21, Section 1.1.2 Formatting and pages 25-27, Section 1.2.1 Paging and Scrolling and Section 1.2.3 An Extended Page Layout Model). Adler

does not disclose a method in which the language of the page objects is MO:DCA, a common presentation imaging language. However, Sall discloses a method in which an XML is converted to XSL-FO based on an XSL stylesheet, then based on XSL-FO convert the document to a PDF (pages 1-2 of Sall), which as defined in 1998 by McCalpin (page 3 of "Traditional Electronic Printing on the Internet") as being an common analogous presentation language to MO:DCA. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Adler with methods taught by Sall because this method was noted to be a potential replacement for typical desktop published due to formatting advantages.

(10) Response to Argument

Regarding appellant's arguments on pages 8-9, in reference to the rejection on the grounds of Res Judicata, the examiner respectfully disagrees and the rejection has been maintained. The appellant states that the Board of Patent Appeals and Interferences (hereinafter BPAI) ruled that a page object has previously claimed contained the content and formatting properties for "one or more pages," and thus changing the claim limitation to clarify that a page object contains the content and formatting for "only" one page object. However, this does not distinguish the current claims from the previously adjudicated claims. The phrase "one or more" is not patentably distinct from the phrase "only one" based solely on the literal meanings of the two phrases. The phrase "one or more" provides the limitation of having at least one of the specific criteria and does not require the existence of any more than that one, thus

having "only one" would fall into the definition of the phrase "one or more" which is the reason that the slight change in the language of the claim limitation does not distinguish the current claims from the previously appealed claims.

Regarding appellant's arguments on pages 10-15, in reference to a page object having the content and formatting for only one page, the examiner maintains that Adler discloses the limitations it was previously and is currently worded, thus the rejection has been maintained. Adler discloses that a result tree is generated by processing the XSL document (layout data structure) and the source tree (source content) (page 18, Final Paragraph and Figure of Adler). Adler explicitly discloses that the result tree consists of objects in the "formatting object" namespace (page 18, Final Paragraph). Adler teaches that, "Formatting semantics are expressed in terms of a catalog of classes of formatting objects. The nodes of the result tree are formatting objects. The classes of formatting objects denote typographic abstractions such as *page*, paragraph, table, and so forth," (page 18, first paragraph, lines 1-4 of Adler). Adler also teaches that the formatting objects are represented as XML elements with the properties and attributes of the XML value pairs and the content of the original XML element (i.e. original source content) (page 18, Final Paragraph of Adler). This process is more clearly explained using the figure on Page 19, which shows the source tree (original XML content) is transformed using XSL stylesheet, which represents the formatting information for the XML content. This process creates the result tree which has formatting objects for nodes which included the original XML content and formatting information necessary to properly display the content. In other words, the result of processing the source content and the

layout data structure is a result tree. This result tree consists of formatting objects which correspond to typographic abstractions such as pages, also known as “page objects,” if the document being processed consisted of more than one page of data the result tree would be required to have multiple page objects. As previously stated Adler teaches that the formatting objects are represented as XML elements with the properties and attributes of the XML value pairs and the content of the original XML element (i.e. original source content) (page 18, Final Paragraph of Adler). Therefore, these objects are stand-alone abstractions which contain both the formatting and the content necessary for each typographic abstraction, and once again in this case would be only one page. Thus, again the rejection of the invention as claimed remains proper.

(11) Related Proceeding(s) Appendix

Copies of the court or Board decision(s) identified in the Related Appeals and Interferences section of this examiner's answer are provided herein.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Joshua D Campbell/

Primary Examiner, Art Unit 2178

Conferees:

/Stephen S. Hong/

Supervisory Patent Examiner, Art Unit 2178

/William L. Bashore/

Supervisory Patent Examiner, Art Unit 2175

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEVEN MARK GEBERT, DAVID GEORGE GREENWOOD, REINHARD HEINRICH HOHENSEE, HARRY RESSE LEWIS JR., DWIGHT ROSS PALMER, ARTHUR RAY ROBERTS, and DAVID EARL STONE

Appeal 2007-2804
Application 09/782,850
Technology Center 2100

Decided: January 23, 2008

Before JAMES D. THOMAS, ALLEN R. MACDONALD, and ST. JOHN COURTENAY III, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 2, 4-11, 14-16, 18-25, 28-30, 32-39, and 42-48. Claims 3, 12, 13, 17, 26, 27, 31, 40, and 41 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

THE INVENTION

The disclosed invention relates generally to a method, system, and program for preprocessing a document for rendering on an output device. (Spec. 1). In accordance with one embodiment, a source document is received along with a page layout data structure that provides formatting properties specifying a layout and format of the content output. The source document and the page layout data structure are processed to determine page divisions and formatting properties for the content in the source document. Multiple page objects are generated, wherein each page object includes content and formatting properties for at least one page. A rasterizer transforms the page objects into renderable information for printing (Spec. 4).

Independent claim 1 is illustrative:

> 1. A method for processing a source document in a structured document format including elements providing source content to render, wherein the source content comprises code that is rasterized into output, comprising:
>
> receiving the source document including source content in a presentation language;
>
> receiving a layout data structure separate from the source document, providing formatting properties specifying a layout and format of the content output, wherein the layout data structure does not include source content;
>
> processing the source document and the layout data structure to determine formatting properties, including page divisions, for the content in the source document;

> generating multiple page objects, wherein each page object includes source content in the presentation language used in the source document and the determined formatting properties for one page, wherein at least one page object has multiple content elements, and wherein the content elements include content to place on the pages; and
>
> transmitting the page objects to a rasterizer to transform into renderable information capable of being generated by an output device.

THE REFERENCES

The Examiner relies upon the following references as evidence in support of the rejections:

Adler, "Extensible Stylesheet Language (XSL) Version 1.0," W3C, Working Draft 1-29 (Oct. 18, 2000).

Sall, "FOP: Formatting Object to PDF Translator (James Tauber)," 1-3 (May 24, 1999).

Saito	US 5,323,312	June 21, 1994
Barry	US 6,606,165	Aug. 12, 2003

THE REJECTIONS

1. Claims 1, 2, 4, 8-11, 14-16, 18, 22-25, 28-30, 32, 36-39, and 42-48 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Adler in view of Saito.

2. Claims 5, 7, 19, 21, 33, and 35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Adler in view of Saito as applied to claims 2, 16, and 30 above, and further in view of Barry.
3. Claims 6, 20, and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Adler in view of Saito, and further in view of Barry as applied to claims 5, 19, and 33 above, and further in view of Sall.

PRINCIPLES OF LAW

"What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103." *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007). To be nonobvious, an improvement must be "more than the predictable use of prior art elements according to their established functions." *Id.* at 1740. Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)). Therefore, we look to Appellants' Briefs to show error in the proffered prima facie case.

Combinability under 35 U.S.C. § 103

Appellants contend that the primary Adler reference "teaches away" from the instant claims (*see* App. Br. 7-8). In particular, Appellants contend

that Adler "teaches away" because the instant claimed "page objects" include source content and formatting properties for one page (*Id.*).

We disagree. We note that the cited Adler reference is a working draft of the Extensible Stylesheet Language (XSL) Version 1.0 (Adler 1). We agree with the Examiner that Adler teaches components such as XSL formatting objects (XSL-FO) that format content on a per-page basis (*see e.g.,* Adler, p. 18, ¶1). Moreover, the Examiner has relied on the Saito secondary reference as evidence that it was well known in the art that a structured document could consist of two parts, i.e., a "logical structure" containing source content and a "layout structure" containing formatting information in the context of a page object (*see* Ans. 4; *see also* Saito, col. 1, ll. 32-57).

We particularly note that Appellants' Specification expressly discloses the use of the XML presentation language, the Extensible Stylesheet Language (XSL), and XSL formatting objects (XSL-FO) in accordance with one embodiment of the instant invention (Spec. 4:23-25). Thus, we conclude that Appellants' claims broadly encompass familiar elements (e.g., XML, XSL, and XSL-FO) that have been combined according to known methods in a manner that would have yielded predictable results (e.g., formatted pages). Our reviewing court has reaffirmed that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Leapfrog Enter., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (quoting *KSR*, 127 S. Ct. at 1739). Appellants have not

shown that the claimed combination of familiar elements produces any new function.[1] Moreover, Appellants have not provided any factual evidence of secondary considerations, such as unexpected or unpredictable results, commercial success, or long felt but unmet need. Accordingly, we find unpersuasive Appellants' arguments that Adler "teaches away" from the instant claims.

Since Adler is the primary reference relied on by the Examiner for each rejection, the combinability discussion above is applicable to each of the three stated rejections.

Elements under 35 U.S.C. § 103

At the outset, we note that the first-stated rejection is argued as four separate groups of claims (denoted here as Groups I-IV).

Group I

Claims 1, 4, 9-11, 14, 15, 18, 23-25,

28, 29, 32, 37-39, 42, 43, 45, and 47

We consider the Examiner's rejection of claims 1, 4, 9-11, 14, 15, 18, 23-25, 28, 29, 32, 37-39, 42, 43, 45, and 47 as being unpatentable over Adler in view of Saito. Since Appellants' arguments have treated these claims as a single group which stand or fall together, we will select independent claim 1

[1] In *KSR*, the Supreme Court reaffirmed that "[w]hen a patent 'simply arranges old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement, the combination is obvious." *KSR*, 127 S. Ct. at 1740 (quoting *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976)).

as the representative claim for this rejection. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2006).

Appellants contend that neither Adler nor Saito teaches generating multiple page objects including "source content in the presentation language used in the source document and the determined formatting properties for one page," as claimed (App. Br. 8-9, 11-12; *see also* independent claims 1, 15, and 29). Appellants further contend that neither Adler nor Saito teaches the claimed rasterizing of page objects (App. Br. 11; *see also* independent claims 1, 15, and 29).

The Examiner disagrees (Ans. 8-10). The Examiner, as finder of fact, has determined that Adler teaches a result tree generated by processing a XSL document (i.e., layout data structure) and a source tree (i.e., source content) (Adler 18). The Examiner notes that Adler teaches that the nodes of the result tree are formatting objects where the classes of formatting objects denote typographic abstractions such as *page,* paragraph, table, etc. (Adler 18, ¶1, ll. 1-4).

The Examiner relies upon Saito as teaching that it was well known in the art for a structured document to consist of two parts, i.e., a layout structure and a logical structure (i.e., source content) (*see* Saito, col. 1, ll. 31 -57) (Ans. 10). The Examiner finds that Saito's page objects accommodate more than one content object on the page. The Examiner contends that any document that has text and an image or table would fall into the category of having multiple content elements (Ans. 10).

Regarding the claimed step of rasterizing page objects, the Examiner maintains that all computer files are rasterized when they are printed. Thus, the Examiner reasons that when Adler's result tree is rendered for printing (or display), it is rasterized (Ans. 10-11).

Issues

We decide the issue of whether the combination of Adler and Saito teaches and/or suggests generating multiple page objects including "source content in the presentation language used in the source document and the determined formatting properties for one page," as claimed (*see* independent claims 1, 15, and 29). We also decide the issue of whether the combination of Adler and Saito teaches and/or suggests the claimed rasterizing of page objects (*see* independent claims 1, 15, and 29).

We begin our analysis by construing the scope of the claimed "page objects" (claim 1). *See In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000) ("[D]uring examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification."). Our reviewing court has determined that "[w]here an inventor chooses to be his own lexicographer and to give terms uncommon meanings, he must set out his uncommon definition in some manner within the patent disclosure" so as to give one of ordinary skill in the art notice of the change. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (*quoting Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88 (Fed. Cir. 1992)).

Here, we find no specialized definition for "page objects" within Appellants' Specification. Nevertheless, when we look to the Specification

for *context*, we find Appellants have broadly described "page objects" as not being limited to the content and formatting properties for a *single* page, as follows:

> Multiple page objects are generated, wherein each page object includes content and formatting properties *for at least one page*. The page objects are transmitted to a rasterizer to transform into renderable information capable of being generated by an output device [emphasis added].

(Spec. 4:12-15).

Thus, we broadly but reasonably construe Appellants' claimed "page objects" as not being limited to a *single page*. For example, Appellants' representative claim recites "each page object includes the source content in the presentation language used in the source document and the determined formatting properties for *one page* . . . ;" (claim 1, emphasis added). We conclude this claim language broadly encompasses a page object with source content in the presentation language used in the source document and the determined formatting properties consisting of one *or more* pages.

Moreover, we find Appellants' have set forth an extremely broad definition as to the intended meaning of the claimed "formatting properties" in the Specification, as follows:

> The term "formatting properties" as used herein describes any information used to express the layout and presentation of the accompanying content, such as page layout, fonts, page size, element size, color, margins, headers, static information, page numbering, indents, word-and letter-spacing, widow and orphan setting, hyphenation and *any other format feature known in the*

> *art used to define the appearance of a page of content* [emphasis added].

(Spec. 7, ll. 1-5).

In light of the above claim construction and the breadth of representative claim 1, we agree with the Examiner that the combination of Adler and Saito reasonably teaches and/or suggests generating multiple page objects including "source content in the presentation language used in the source document and the determined formatting properties for one page," as claimed (*see* independent claims 1, 15, and 29).

Specifically, we agree with the Examiner that the instant claimed page objects are at least suggested by Adler's teaching that formatting objects denote typographic abstractions such as page, paragraph, table, etc. (Adler 18, ¶1, ll. 1-4). Moreover, we find Saito expressly teaches page objects with content and formatting information (i.e., layout structure) (*see* Saito, col. 1, ll. 31 -57). We also agree with the Examiner that any document that has text and an image or table would fall into the category of having multiple content elements (*see* Ans. 10).

Regarding the second issue of whether the combination of Adler and Saito teaches and/or suggests the claimed rasterizing of page objects, we further agree with the Examiner that all computer files are rasterized when they are printed. Thus, we find Appellants have not shown error in the Examiner's reasoning that rasterizing is inherently performed when Adler's result tree is rendered for printing (*see* Ans. 10-11).

For at least the aforementioned reasons, we conclude Appellants have not established that the Examiner erred with respect to establishing a prima facie case of obviousness. Therefore, we sustain the Examiner's rejection of representative claim 1 as being unpatentable over the teachings of Adler in view of Saito.

Pursuant to our authority under 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to the remaining claims in this group on the basis of the selected claim alone. Therefore, we sustain the Examiner's rejection of claims 4, 9-11, 14, 15, 18, 23-25, 28, 29, 32, 37-39, 42, 43, 45, and 47 as being unpatentable over Adler in view of Saito for the same reasons discussed *supra* with respect to representative claim 1.

Group II

Claims 2, 16, and 30

We consider next the Examiner's rejection of claims 2, 16, and 30 as being unpatentable over Adler in view of Saito.

We note that claim 2 recites, in pertinent part:

> [T]ransforming the source document and source content therein into a result document in a second presentation language, wherein the result document includes the source content and the formatting properties provided by the layout data structure, wherein the formatting properties indicate page divisions of the content, and wherein the *multiple page objects are generated from the result document* [emphasis added].

(claim 1).

Appellants acknowledge that Adler discusses how the result and source documents are in different presentation languages (App. Br. 13, ¶3). Nevertheless, Appellants contend that Adler does not teach generating page objects from the result document that include source content in the first presentation language used in the source document, as follows:

> Applicants submit that although the source and result documents are in different formats, the Examiner has not cited any part of Adler that teaches generating from the result document page objects that include source content in the first presentation language used in the source document. Instead, the cited Adler discusses how the result and source documents are in different presentation languages.

(App. Br. 13, ¶3).

The Examiner initially cited pages 20-21 and 25-27 of Adler as teaching page objects generated by filling XML content into containers (Final Action 4). In the Answer, the Examiner has further pointed to Adler's XSL implementation of an Extended Page Layout Model (Adler 27, § 1.2.3) (Ans. 12, ¶3). Appellants acknowledge that the cited page 27 of Adler mentions that the XSL formatting objects provide rules by which XML source content is placed in "containers" (App. Br. 13). Nevertheless, Appellants contend that the Examiner has not cited any part of Adler that teaches or suggests that each of these cited "containers" provide content and formatting properties for one page, as claimed (App. Br. 12-13).

We begin by noting that the scope of the claimed "page objects" broadly but reasonably encompasses one *or more* pages, as discussed *supra*. Moreover, one cannot show nonobviousness by attacking references

individually where the rejections are based on combinations of references. *See In re Merck & Co.,* 800 F.2d 1091, 1097 (Fed. Cir. 1986). Here, we find Appellants' arguments are directed to the individual references in isolation rather than the combination of references as a whole. We have found *supra* that the instant claimed page objects are at least suggested by Adler's teaching that formatting objects denote typographic abstractions such as *page,* paragraph, table, etc. (Adler 18, ¶1, ll. 1-4). Moreover, Saito expressly teaches page objects with content and formatting information (i.e., layout structure) (*see* Saito, col. 1, ll. 31 -57). Therefore, on the record before us, we find the weight of the evidence supports the Examiner's position that the subject matter of claims 2, 16, and 30 is rendered obvious by the teachings of Adler and Saito.[2]

For at least the aforementioned reasons, we conclude Appellants have not established that the Examiner erred with respect to establishing a prima facie case of obviousness. Therefore, we sustain the Examiner's rejection of claim 2 as being unpatentable over the teachings of Adler in view of Saito. Because claims 16 and 30 recite essentially the same limitations as claim 2, we sustain the Examiner's rejection of these claims as being unpatentable over Adler in view of Saito for the same reasons discussed above regarding claim 2.

Group III

[2] *See In re Hoeschele,* 406 F.2d 1403, 1406-07 (CCPA 1969) ("[I]t is proper to take into account not only specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom . . . .").

Claims 8, 22, and 36

We consider next the Examiner's rejection of claims 8, 22, and 36 as being unpatentable over Adler in view of Saito.

Appellants dispute the findings of the Examiner, as follows:

> The Examiner has not cited any part of Adler that teaches or suggests generating page objects from the result document having content and formatting properties in the first and second presentation languages. For instance, pg. 18 of Adler shows a result tree going to an output device via an XSL formatter, but nowhere shows generating page objects including content and formatting properties from the result document in presentation languages as claimed.

(App. Br. 15).

The Examiner disagrees, as follows:

> As previously stated, Adler discloses an ability of XSL known as the Extended Page Layout Model. In this model, once a result tree exists "simple-page-masters" may be used to which content is used to fill pages and how the styled content (original XML content) is to be placed regionally on the page using XSL (the second presentation language) (page 27, section 1.2.3 of Adler). Thus, [Adler] clearly show[s] page objects being generated from the result document including source content in a first language and formatting properties in a second language.

(Ans. 13, ¶1).

We note, again, that the Examiner's rejection is based upon the combination of Adler and Saito, as discussed above. We have found *supra* that Saito's page objects include content and formatting (i.e., layout) information, as claimed (*see* Saito, col. 1, ll. 31 -57). Moreover, we find at least one embodiment of Appellants' invention implements Extensible

Markup Language (XML) as a first presentation language and Extensible Stylesheet Language Formatting Objects (XSL-FO) as a second presentation language (*see* Spec. 4:22-25). Therefore, we agree with the Examiner's findings of fact and will sustain the Examiner's rejection for essentially the same reasons argued by the Examiner.

For at least the aforementioned reasons, we conclude Appellants have not established that the Examiner erred with respect to establishing a prima facie case of obviousness. Therefore, we sustain the Examiner's rejection of claim 8 as being unpatentable over the teachings of Adler in view of Saito. Because claims 22 and 36 recite essentially the same limitations as claim 2, we sustain the Examiner's rejection of these claims as being unpatentable over Adler in view of Saito for the same reasons discussed above regarding claim 8.

Group IV

Claims 44, 46, and 48

We consider next the Examiner's rejection of claims 44, 46, and 48 as being unpatentable over Adler in view of Saito.

Appellants dispute the findings of the Examiner, as follows:

> Although the cited Saito discusses laying out document content in page objects, nowhere is there any teaching of page sequence elements including content elements, such that the page sequence elements are accessed according to an ordering and then the content elements within the accessed page sequence

> elements are added to the page objects. Nowhere does the cited Saito anywhere teach or suggest the claim requirement of including content elements in page sequence elements to determine how to add content elements to page objects.

(App. Br. 16).

The Examiner disagrees, as follows:

> Saito discloses that it was well known in the art that a structured document could consist of two parts[:] a layout structure and a logical structure (source content in the logical page viewing sequence), and when filling the page objects defined by the layout structure more than one content object from the logical structure could be used per page until a page is full at which point the next page object is filled with content and so forth (column 1, lines 31-57 of Saito). These teachings combined with the Extended Page Layout Model teachings in Adler (page 27, section 1.2.3 of Adler) render the claimed limitations obvious.

(Ans. 13-14).

We find Appellants have not directly addressed the Examiner's response. Moreover, the Supreme Court has stated that the analysis under §103 "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 127 S. Ct. at 1741. Here, we conclude that Appellants have not shown error in the Examiner's reasoning. Thus, Appellants have not established that the Examiner erred with respect to establishing a prima facie case of obviousness. Therefore, we sustain the Examiner's rejection of claim 44 as being unpatentable over the teachings of Adler in view of Saito. Because

claims 46 and 48 recite essentially the same limitations as claim 44, we sustain the Examiner's rejection of these claims as being unpatentable over Adler in view of Saito for the same reasons discussed above regarding claim 44.

Group V

Claims 5, 7, 19, 21, 33, and 35

We consider next the Examiner's rejection of claims 5, 7, 19, 21, 33, and 35 as being unpatentable over Adler in view of Saito, and further in view of Barry. Since Appellants' arguments have treated these claims as a single group which stand or fall together, we will select dependent claim 5 as the representative claim for this rejection. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2006).

Claim 5 recites, in pertinent part, that "page objects include formatting properties in a third presentation language" (claim 5).

Appellants dispute the findings of the Examiner, as follows:

> The Examiner cited Barry as teaching an additional presentation language, a page description language - image bit-map. Although multiple presentation languages may be known, Applicants submit that the Examiner has not cited any part of the combination of references that teaches that a page object includes content in the first presentation language used in the source document and formatting properties in a third presentation language, such that the page objects are generated from a result document in a second presentation language.

(App. Br. 17).

We agree with Appellants that multiple presentation languages are known. In particular, we direct Appellants' attention to Adler's use of the CSS2 specification (Adler, p. 25), which is a third presentation language (where CSS2 indicates the use of the Cascading Style Sheets, level 2 presentation language, as defined by the W3C CSS2 level 2 Specification). Therefore, we find that the prior art of record expressly teaches at least three presentation languages. Moreover, we find the language of the claim is implicitly suggested by the Examiner's proffered combination of Adler, Saito, and Barry. Our reviewing court has determined that the test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. *In re Kahn*, 441 F.3d 977, 987-88 (Fed. Cir. 2006) (*citing In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000)). Therefore, we will sustain the Examiner's rejection of representative claim 5.

Pursuant to our authority under 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to the remaining claims in this group on the basis of the selected claim alone. Therefore, we sustain the Examiner's rejection of claims 7, 19, 21, 33, and 35 as being unpatentable over Adler in view of Saito and Barry for the same reasons discussed *supra* with respect to representative claim 5.

Group VI

Claims 6, 20, and 34

Appellants contend that claims 6, 20, and 34 are patentable over Adler in view of Saito, Barry, and Sall for the same reasons previously argued regarding independent claims 1, 15, and 29, as well as intervening dependent claims 5, 19, and 33 (*see* App. Br. 18). Since we have found Appellants have failed to show error in the Examiner's rejection of independent claims 1, 15, and 29 (and intervening dependent claims 5, 19, and 33), we sustain the Examiner's rejection of claims 6, 20, and 34 for the same reasons previously discussed regarding independent claims 1, 15, and 29 (and also intervening dependent claims 5, 19, and 33).

OTHER ISSUE

In the event that prosecution is reopened in this application, we leave it to the Examiner to consider a 35 U.S.C. § 101 rejection of claims 29, 30, 32, 33-39, 42, and 47-48 as being directed to non-statutory subject matter. From the Specification it is clear that the scope of the claimed "article of manufacture" that "comprises code capable of causing a processor to perform" (independent claim 29) broadly encompasses "wireless transmission media, signals propagating through space, radio waves, infrared signals, etc." (Spec. 13:16-17). This technology has been found to be non-statutory.

A claim directed to computer instructions embodied in a signal is not statutory under 35 U.S.C. § 101. *See In re Nuijten*, 500 F.3d 1346, 1357 (Fed. Cir. 2007) ("A transitory, propagating signal like Nuijten's is not a

'process, machine, manufacture, or composition of matter.' Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be patentable subject matter.").

CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that Appellants have not shown the Examiner erred in rejecting claims 1, 2, 4-11, 14-16, 18-25, 28-30, 32-39, and 42-48 under 35 U.S.C. § 103(a) for obviousness.

DECISION

The decision of the Examiner rejecting claims 1, 2, 4-11, 14-16, 18-25, 28-30, 32-39, and 42-48 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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